

**1/3" CCD COLOR PAN / TILT
DOME CAMERA
WITH 3x DIGITAL ZOOM**

Instruction Manual

English Version1.0



**MODEL:
SG7381**



www.lorexcctv.com

Thank you for purchasing this Indoor, Mini Color Dome Camera, with Pan / Tilt control and 3x Digital Zoom. Lorex is committed to providing our customers with a high quality, reliable security product.



This camera features a 1/3" Color CCD and Digital Signal Processing (DSP), allowing for excellent picture quality under varying conditions.

This compact smoked acrylic dome blends with any décor, and provides discrete video surveillance. The motorized controls have the ability to give you a viewing angle of 330° horizontal, and 90° vertical.

This dome camera can connect to any Lorex Color Observation System or DVR with a 6-pin DIN or BNC / RS-485 Connection supporting the PELCO-D Protocol.

To learn more about the LCD / 8 Channel DVR Combo, and to learn about our complete range of accessory products, please visit our website at:

<http://www.lorexcctv.com>

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products' enclosure that may be of sufficient magnitude to constitute a risk of electric shock



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF THE PLUG TO THE WIDE SLOT AND FULLY INSERT.

Please visit us on the web for the most current Manuals, Quick Start Guides and Firmware.
Additional Language Manuals are also available at:

<http://www.lorexcctv.com>

General Precautions

1. All warnings and instructions of this manual should be followed
2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water dampened cloth for cleaning
3. Do not use this unit in humid or wet places
4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked
5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge

FCC CLASS B NOTICE

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for assistance

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows this manual's guideline to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

LOREX TECHNOLOGY INC.

<http://www.lorexcctv.com>

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Camera Features

- High Resolution Color CCD camera
- 480 lines, 1.0 lux
- Indoor Pan/Tilt Dome System
- Supports PELCO-D Protocol
- Auto Pan -330°, Auto Tilt -90°
- 3x Digital Zoom
- Light Weight, Compact Size
- 6 pin DIN connection & BNC / RS-485 Adaptor
- Smoked housing provides unobtrusive appearance

Getting Started

The system comes with the following components:



**1 x MINI COLOR PAN / TILT
DOME CAMERA**



**1 x 60' DIN EXTENSION
CABLE**



1 x MOUNTING BRACKET



**1 x DIN TO BNC / RS-485
ADAPTOR CABLE**



**1 x POWER ADAPTOR FOR
DIN TO BNC ADAPTOR**



1 x HARDWARE MANUAL

CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

Camera Connections – DIN Cable

NOTE: Visit us on the web at <http://www.lorexcctv.com> for a full list of compatible Observation Systems.

Before installation make sure that:

- You have the proper lift equipment or ladder to reach the installation location.
- Electrical power is not connected to the dome camera and surveillance monitor during installation.

DIN Installation

NOTE: The camera will only work on CHANNEL 1 when using the DIN Cable connection.

1.) Connect the 60 ft Din cable (included with the dome camera) to the wired lead of the dome camera.

NOTE: Confirm that the arrows on the DIN Camera Cable and the DIN Extension cable are pointed together when connecting the cable. If the pins in the DIN Connector are bent, the Camera will NOT function.



2.) Attach the adaptor plate on the ceiling using the 3 screws provided (M3X20 screw). The mounting bracket must be attached to a structural object, such as a ceiling rafter which will support the weight of the camera.

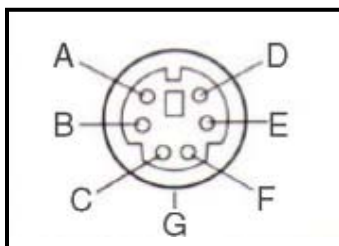
3.) Twist the base of the dome camera on to the adaptor plate on the ceiling. Do not hold the clear plastic bubble or swivel when you attach the dome to the adaptor plate.

4.) Connect the other end of the 60 ft cable to the CH1 DIN Camera Input on the back of the Observation System (the System must include a Pelco-D Pan/Tilt Zoom feature).

5.) Turn on the Observation System.



DIN – Port Pins



- A. Video Input
- B. Audio Out
- C. NC (Not Connected)
- D. B+ 12V (Power)
- E. Audio Input
- F. Camera Audio AMP: B+ 12V (Power)
- G. Ground

Camera Connections – DIN to BNC / RS-485 Adaptor Cable

NOTE: The camera will work on a BNC channel when using the Adaptor Cable. Please refer to the Observation System User manual for details on available channels for PTZ functionality.

1.) Connect the 60 ft Din cable (included with the dome camera) to the wired lead of the dome camera.

NOTE: Confirm that the arrows on the DIN Camera Cable and the DIN Extension cable are pointed together when connecting the cable. If the pins in the DIN Cable are bent, the Camera will NOT function.

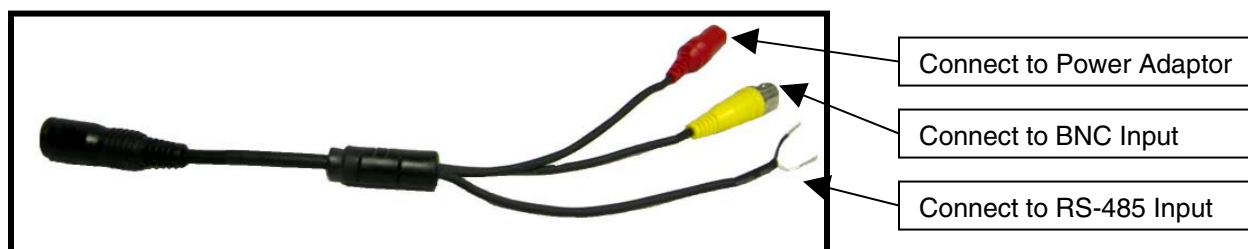


2.) Attach the adaptor plate on the ceiling, using the 3 screws provided (M3X20 screw). The mounting bracket must be attached to a structural object, such as a ceiling rafter which will support the weight of the camera.

3.) Twist the base of the dome camera on to the adaptor plate on the ceiling. Do not hold the clear plastic bubble or swivel when you attach the dome to the adaptor plate.

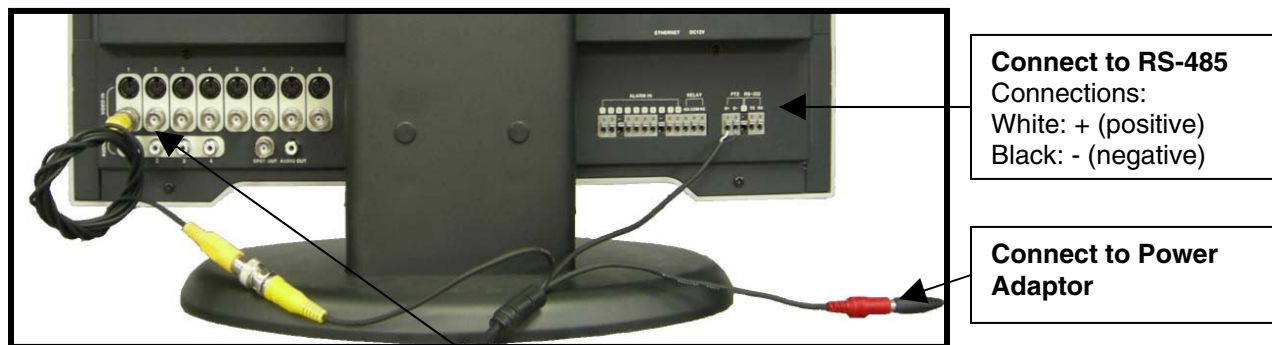
4.) Connect the other end of the 60 ft cable to the BNC / RS-485 Adaptor Cable.

5.) Connect the leads from the Adaptor cable to the inputs on the back of the Observation System (the Observation System must include a Pelco-D Pan/Tilt Zoom feature).



5.) Turn on the Observation System or DVR.

Observation System / DVR Connections



Connect to BNC Input.

Note: BNC Adaptors and/or RCA Cable may be needed for some systems (as shown above).

Observation System / DVR Connections (cont.)

Connecting to RS-485 (PTZ):



Connections:
White: RS-485 +
Black: RS-485 -

Note: Additional settings are required on the Observation System (to control the PTZ). Please refer to the Observation System Hardware Manual for menu details

Connecting to BNC:



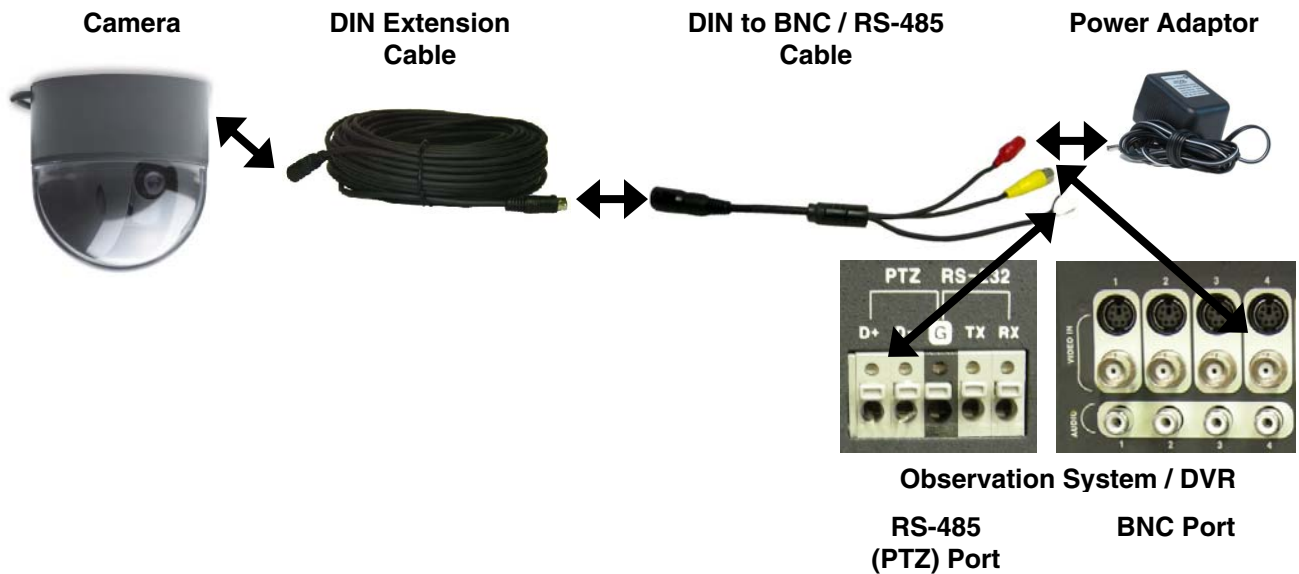
The BNC end of the cable may be connected directly to the back of the Observation System or DVR. In some cases, adaptors may be needed for connection.

BNC to RCA Adaptor

RCA Cable

BNC to RCA Adaptor

Connectivity Diagram



Changing the Camera Address Settings

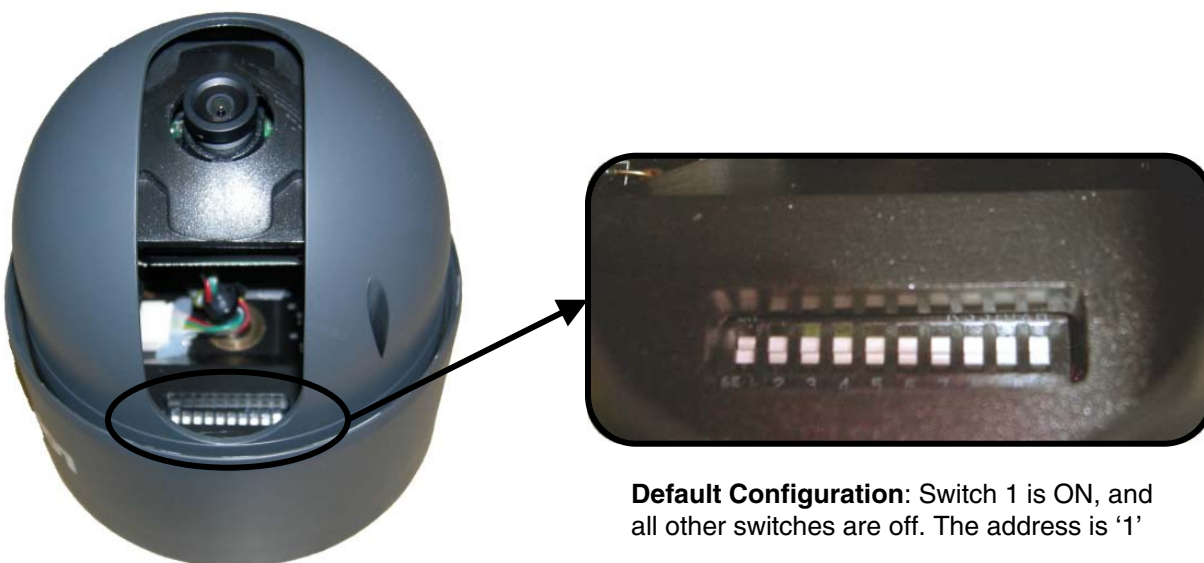
NOTE: This is only applicable when using the BNC Adaptor cable. CH1 is the only available channel if using the DIN Connection.

The DIP switches inside the camera can be changed to set a unique address for the Camera (set to 1 by default). The address range is between 1~255:

- If using a single camera, the address does not need to be changed. Refer to the Hardware Manual for the Observation System for camera channel placement and configuration.
- If using multiple cameras, each camera must be set to a unique address using the internal DIP switches. The DIP switches shown below.

To access the DIP switches:

1. Remove the Dome Cover.
2. Use the chart below to set the desired address. Set the dip switches (ON is up; OFF is down) using a paperclip or other pointed tool.



Default Configuration: Switch 1 is ON, and all other switches are off. The address is '1'

DIP Switch Address Chart

Address	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF

DIP Switch Address Chart (cont...)

Address	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF

Calculating the DIP Switch Addresses

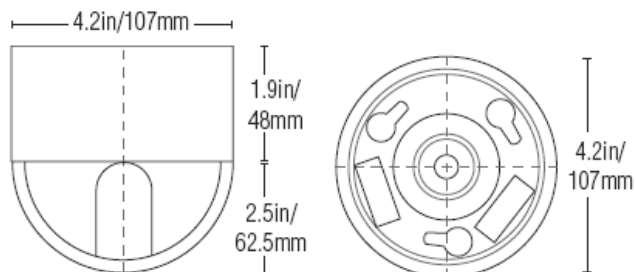
Each switch in the block has a specific associated value. When the switch is turned ON, the value is added to the total.

Switch #	1	2	3	4	5	6	7	8	9	10	Address
Value	1	2	4	8	16	32	64	128	N/A	N/A	
Ex. 1	off	ON	off	off	ON	off	off	off	-	-	18
Ex. 2	ON	ON	ON	off	off	ON	ON	off	-	-	103
Ex. 3	ON	off	off	ON	ON	off	off	ON	-	-	153

Technical Specifications

Image Sensor	1/3" Interline Transfer Color CCD
Effective Pixels	768K (H) x 494K (V)
Scanning System	525 Lines, 2:1 Interlace
Scanning Frequency	15.734 KHz (H) x 59.94Hz (V)
Horizontal Resolution	480 TV Lines
Lens	3.8 mm
Shutter Speed	1/60 ~ 1/100,000 sec.
S/N Ratio	More than 48dB
Digital Zoom Ratio	3x
Pan / Tilt Speed	Pan 50° /sec. Tilt 40° /sec.
Pan / tilt Travel	Pan maximum 330° Tilt maximum 90°
PTZ Protocol	Pelco-D
Baud Rate Supported	2400
Minimum Illumination	1.0 lux (F1.2)
Video Output	1.0V p-p (75 ohms)
Power Requirement	<ul style="list-style-type: none"> • From monitor via cable (when using DIN only) • From power adaptor (when using the DIN to BNC / RS-485 Adaptor cable).
Operating Temperature	14 °F – 122°F -10°C to 50°C
Operating Humidity	90% RH Max
Dimensions	4.21" (W) x 4.35" (H) x 4.21" (D) 107mm (W) x 110.5mm (H) x 107mm (D)
Weight	2.5 lbs 1.1 kg
Housings	Black – ABS Plastic
Connections	<ul style="list-style-type: none"> • 6 pin DIN -OR- • BNC with RS-485 Adaptor and Power Adaptor

Dimensions



As our products are subject to continuous improvement, LOREX Technology Inc. and its subsidiaries reserve the right to modify product design, specifications and prices, without notice and without incurring any obligation. E&OE